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Editorial:

Introducing a Concept Hierarchy for the *Journal of Research Practice*

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Abstract

With this issue of the *Journal of Research Practice*, we initiate a conceptual framework for thinking and writing about research, defining areas of editorial focus, and indexing work published in the journal. The framework takes the form of a concept hierarchy that offers index terms at three interrelated levels: (1) focus areas for reflection on research practice within which the journal aims to achieve excellence and strengthen its profile and visibility, (2) subject areas relevant to research practice that the journal aims to cover and in terms of which it defines its focus areas, and (3) keywords for capturing the content of research work done in these subject areas or for reflecting and writing about it. Focus areas are characterized by assigned subject areas; subject areas are characterized by assigned keywords. The concept hierarchy is part of a more comprehensive initiative to strengthen the journal's profile and visibility, an initiative that will also include a restructuring of the editorial team and new roles for the journal's dedicated reviewers and active readers. The article introduces an initial version of the concept hierarchy, explains its intended use and further development, and situates it in the larger effort of which it is a part.

Index Terms: concept hierarchy; taxonomy; indexing system; index terms; keywords; metadata

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1. Introducing New Initiatives to Develop JRP

The *Journal of Research Practice* (JRP) is completing its seventh year of publication. In these seven years, the journal has demonstrated its ability to serve researchers as a platform for sharing research experiences and insights with other researchers. Thanks to an innovative review system, as well as to committed reviewers and to a careful editorial process, JRP has managed to achieve and maintain a remarkable level of both quality and originality. It is not the kind of online journal that you find by the dozen. It stands out as a journal that is different, and that is how it should be!

We do not mean to be complacent though. That would go against the journal's spirit of encouraging critical reflection and exchange on the ways "research" is practiced and used. Leaning back would also be inappropriate in view of the countless difficult problems that our epoch faces and for which we need to muster all the skills and resources available, among them careful and reflective research. There is, then, reason enough to ask what JRP can do to reach an ever increasing part of the worldwide research community, so as to support good practice in all fields of inquiry.

An extensive analysis of the journal's strengths and weaknesses has led us to identify four main strategies for developing JRP:

Strategy #1. Strengthening JRP's Profile and Visibility
Strategy #2. Restructuring the Editorial Team
Strategy #3. Lowering the High Rejection Rate
Strategy #4. Making Full Use of the Online Open-Access Format

The present Editorial briefly introduces the first two strategies; both rely on the tool to be introduced, the proposed concept hierarchy. The Editorial then focuses on Strategy #1 and introduces the new tool in detail. Strategies #2, #3, and #4 will be the focus of subsequent Editorials.

1.1. Strengthening JRP's Profile and Visibility

Due to the journal's transdisciplinary orientation along with the very broad range of issues that the quest for good research practice entails in all fields of inquiry, it is not always easy for potential authors to assess whether their work is of interest to JRP and what chances they may have to see it published in the journal. Likewise, it may not always be easy for potential readers to judge the journal's relevance to them and whether it will be well-invested time to study its content systematically. Similarly, research educators may find it difficult to recommend the journal to their students or even make it mandatory reading for them, as its aims and focus may not be sufficiently clear to them. Perhaps as a consequence of the combination of these circumstances, we observe that with a few exceptions, the articles we publish tend to get less attention and fewer citations than we think they deserve. In short, we suspect that JRP, given the ever-growing importance of research and the journal's track record of quality and originality, has hardly exhausted its potential.

To tap this potential, we propose a new tool to our readers, authors, and editorial staff. We call it the *JRP concept hierarchy*. A concept hierarchy is exactly what the term suggests: a hierarchically structured collection of concepts that are considered to form the nucleus of a language (terminology) in a certain field of knowledge or inquiry. Different terms are used in philosophy, linguistics, library science, information technology, management science, and other fields concerned with knowledge processing and knowledge management, to refer to this basic idea: classification, categorization, dictionary, taxonomy, typology, controlled vocabulary, thesaurus, lexicon, and so on. Common to all is a hierarchical structure in which some terms will stand for "parent concepts" and others for "child concepts"—broader and narrower terms—as a way to clarify mutual relationships (family relations, as it were) among the terms.

The JRP concept hierarchy uses three levels that we designate "focus areas," "subject areas," and "keywords":

> (a) *Focus areas* are broad clusters of issues that we consider to be of essential relevance to the journal's understanding and examination of research practice,
> (b) *Subject areas* are narrower, but still fairly broad clusters of subjects that the journal aims to cover with a view to doing justice to its focus areas, and finally,
> (c) *Keywords* are clusters of terms that are descriptive of relevant aspects of these subjects.

Index terms—terms for the specific purpose of indexing the content of publications—can be drawn from all three levels, which is to say, we use "index terms" as a general designation for all terms of the concept hierarchy whereas "keywords" are lowest-level terms only.

In its simplest definition, then, the JRP concept hierarchy is a family of concepts that we consider relevant for reflection about research practice, and thus also for developing the journal. By initiating the development of such a concept hierarchy for the field of "research practice," we hope to create a tool that will be valuable as a source of orientation for both the journal's staff and its readers and contributors.

But, readers may wonder, what can a technical effort such as creating a concept hierarchy do to help the journal tap its potential and grow? Basically, we believe that defining focus areas is a useful way to clarify and explain to our readers and authors those topics of particular interest in which the journal aims to excel, that is, to achieve a high standard of quality, originality, and practical relevance. Such clarity of focus appears essential for strengthening JRP's profile and visibility.

By "profile" we mean three closely interdependent qualities:

> (a) *JRP's clarity of purpose:* What are the journal's areas of specialization, its aims, and interests?

> (b) *JRP's quality appeal:* Does the journal publish work of high quality, originality, and relevance?
> (c) *JRP's recognition:* How well regarded is the journal in the worldwide research community?

By "visibility" we mean, in addition,

> (d) *JRP's audience:* Does the journal reach its target audience? How many regular readers does it have, how many of them contribute actively, say, as occasional commentators and reviewers or by joining the journal's online forum? How many submissions of high-quality work does the journal attract? And last but not least, does the journal gain the editorial cooperation of a sufficient number of research theorists and practitioners of international standing?

Strengthening the journal's profile and visibility along these lines should make it attractive for outstanding research practitioners and scholars to cooperate with JRP. The proposed concept hierarchy will serve this aim in two ways. It will serve us as a device for editorial decision making, that is, for steering the journal towards the desired profile and visibility, thanks to well defined focus areas. At the same time it will serve the journal's authors, reviewers, and editorial staff for thinking through individual contributions--topics for articles, the content of submissions, and required revisions of accepted submissions--as well as for indexing published articles so that interested readers worldwide have a greater chance of finding them.

Further, as announced at the outset, the concept hierarchy is part of a more encompassing effort. It involves four basic strategies to develop the journal, of which this Editorial presents the two which rely on the idea of a concept hierarchy. Let us briefly turn to it before we introduce the concept hierarchy in detail and subsequently explain its practical handling for indexing purposes.

1.2. Restructuring the Editorial Team

Tied to the development of a concept hierarchy is a second strategy: we intend to restructure the editorial team. It was said above that one of the main uses of the concept hierarchy is to help us define "focus areas," so as to give everyone involved and interested more specific orientation than was thus far available as to the journal's aims and areas of special interest. The same device will serve us to continuously monitor the journal's success in implementing those areas of focus, as well as to review and adapt them when required.

A new idea that comes in at this stage is that developing the journal's profile and visibility in this way should also make it attractive for outstanding research practitioners and scholars to cooperate with JRP. We will be better equipped to appoint such researchers as *Focus Editors* for the focus areas. In fact, the idea of having domain-specific editors resulted as an unexpected benefit of the idea of defining focus areas—a

consequence we find encouraging, as it suggests to us that developing a concept hierarchy is indeed a useful device for supporting us in our editorial task, in a way that goes beyond article indexing.

Gaining the cooperation of recognized researchers as Focus Editors will in turn raise the journal's visibility and appeal to qualified new contributors, who can then help us in further developing the journal's profile as an outlet for quality publications. The idea of having Focus Editors requires us to adapt the structure of the journal's editorial team. It will in the near future comprise four editorial boards replacing the conventional structure we have had thus far--Editors, Associate Editors, and Advisory Board. The Editors and Associate Editors will form a new executive board in charge of running the journal; in addition to the Advisory Board, which will assume a new role, two other new boards with rather innovative functions will support the executive staff.

The new Executive Editorial Board will include new Associate Editors with a strong international profile, some of whom may elect to serve as Focus Editors for the new focus areas. As to the Advisory Board, its members, rather than assuming a mostly passive, representative function, will in future be expected to be actively involved in the editorial process and to really support the executive board with their particular expertise. Accordingly, its members will be appointed on the basis of merit; such merit can consist, for example, in demonstrated practical research experience and/or relevant publications in at least one of the subject areas covered by the journal, and/or in past engagements for the journal. Furthermore, our best reviewers, whose work we appreciate by nominating each year a few of them as JRP Best Reviewers, will be appointed to an innovative Distinguished Reviewers Board and work more closely with the editorial team. Finally, the journal's online forum (the JRP Forum, i.e., the Research_Practice electronic group) will henceforth equally form an integral part of JRP's editorial team, so as to bring to bear their expertise but also to render their important role visible. Details and specific appointments will be communicated as soon as possible.

2. JRP Concept Hierarchy

As already mentioned, the proposed JRP concept hierarchy consists of three levels:

(a) Focus areas
(b) Subject areas
(c) Keywords

Focus areas are defined by a limited number of assigned subject areas; subject areas are defined by an open-ended list of descriptive keywords. Figure 1 illustrates the basic structure of the concept hierarchy by displaying a small sample of elements from the three levels.

Figure 1. Partial view of the three-level JRP concept hierarchy

This graphic representation indicates the highly interconnected nature of the concept hierarchy. Despite the three clear logical levels, the overall structure is rather intricate; the hierarchy takes the form of network, not a tree. One may start anywhere in the network to explore conceptual relationships across the levels (moving from child concepts to parent concepts and back) and thereby, indirectly, also laterally (between concepts of the same level but belonging to different parent concepts). Of course, representing the whole structure visually in a user-friendly manner poses some difficulties. Let us briefly explain the way we constructed the network and then turn to the issue of how we try to make it manageable.

2.1. Construction of the Concept Hierarchy

The process of building the network started with the compilation of an initial list of several hundred index terms bottom-up, which rapidly grew to a provisional list of a few thousand terms that seemed relevant to the theme of research practice. A second step that began almost simultaneously consisted in exploring the relationships among the terms. To this end, internal references of the type "X → Y" were added, where Y terms were considered to embody broader or more general concepts (parent concepts) and X terms were considered to stand for narrower or more specific concepts (child concepts). More "X → Y" references were added to distinguish preferred terms (Y terms) from non-preferred terms (X terms) for designating similar issues, that is, from synonyms not to be used. The first distinction served to develop the three-level structure of the vocabulary; the second, to reduce the number of synonyms used at each level. The two kinds of references were distinguished simply by italicizing the *Y's* standing for parent concepts ("X → *Y*").

Both kinds of references are essential for developing a controlled vocabulary; neither is particularly practical to handle. Both were therefore eventually eliminated by translating them into implicit rather than explicit form. References to parent concepts were replaced by hierarchic representation so that moving up in the network (say, in Figure 1, from "analytical thinking" to "research competence") would represent an implicit reference to a parent concept. References to preferred synonyms became redundant by eliminating non-preferred synonyms or assigning them to different levels (e.g., in Figure 1, "research education" was assigned to the top level while "research training" was assigned to the middle level).

Two requirements were considered in this context:

> (a) All terms used in the network should be unambiguous as to the hierarchic level to which they belong, so that users can later draw index and search terms from all levels, keeping their hierarchical relationship in mind.
>
> (b) Existence of synonyms is not entirely undesirable. Whether two similar terms are really just synonyms or may express a different meaning is not a simple issue; it depends on the context of research practice (meaning is often highly context dependent) as well as on the field of expertise from which researchers come (every field of expertise generates its nuanced meanings).

Fulfilling the first requirement, 41 parent concepts were eventually chosen as the main *subject areas* to be covered by the journal; they were accordingly assigned to the middle level. They in turn served to broadly outline a number of tentative *focus areas* (originally 8, ultimately 6), to which the subject areas were assigned in a non-exclusive way (i.e., a subject area may be taken to be relevant to several focus areas, just as a keyword may be relevant to several subject areas).

Responding to the second requirement, users themselves should have a chance to choose their preferred terms among similar ones. Hence, where usage obviously differs among different fields of expertise or is highly context dependent, as well as in cases where similar terms are all encountered frequently in the literature, preference was given to *not* eliminating equivalent or largely overlapping terms; which amounts to saying that the controlled vocabulary of the concept hierarchy takes them to stand for at least potentially differing concepts, despite some apparent redundancy.

Next, the construction process switched to a top-down process: editorial policy concerns rather than terminological concerns moved to the center. The eight focus areas were now discussed in the light of the aims and ideas we associate with the journal, and the subject areas assigned to them changed accordingly. Eventually they were condensed into six focus areas. A total of 30 subject areas (out of the 41 identified earlier) were considered to be constitutive of one or more focus areas. The remaining 11 subject areas will be part of JRP's indexing system without amounting to areas of editorial focus, although

contributions may very well deal with the issues they raise (see Section 3 for an overview).

2.2. Displaying and Using the Concept Hierarchy

There are two main expected uses of the concept hierarchy. A careful consideration of the upper two levels will provide us with systematic guidance for assessing and developing the journal's content, profile, and visibility (see the earlier definition of the terms "profile" and "visibility" in Section 1.1). The lower two levels, with occasional glances at the top level, will serve us as a source of index terms that are systematically arranged according to subject areas. This will not only facilitate more meaningful search and retrieval of articles published in JRP, it will also provide comprehensive conceptual guidance to future contributors.

Taken together, the three levels of the JRP concept hierarchy can thus be used both as a general*taxonomy* for exploring and reflecting upon research practice and as a specific *indexing system* for identifying material published in JRP with regard to its relevance to selected aspects of research practice. Both uses require a satisfactory way to search in the concept hierarchy for relevant concepts and terms. Since we have already explained the logical structure of the concept hierarchy, we can now concentrate on a practical way to implement it in JRP.

Already in its present initial form, the concept hierarchy comprises over 5,000 concepts and a much larger number of relationships among them. Chances are that continued development of the taxonomy and indexing system, with the anticipated support of the entire JRP community, will make the concept hierarchy grow further. That makes it clear that a useful visual representation is going to require advanced tools of information design, resulting ideally in an interactive graphical user interface (GUI) for exploring the conceptual network in all directions, both vertically and laterally. Unfortunately though, *Open Journal Systems* (OJS), the electronic journal management system used by our publisher and by many publishers of electronic journals, is not currently capable of supporting such tools, so this idea remains a task for the future (see Section 5 below).

At the present time, we have no choice but to implement a less sophisticated solution. We need to resort to conventional, alphabetical lists. How can alphabetical listing represent a complex network such as the JRP concept hierarchy? The basic model is that of a book with chapters, sections, and basic text (corresponding to our focus areas, subject areas, and keywords). You can read a book as a linear text, but you can also jump across chapters and sections and the author can support this process by giving occasional cross-references.

To be sure, rendering the entire conceptual network in a single list is not particularly practical. Because many keywords come under more than one subject area and these in turn come under more than one focus area, a single list would imply multiple listing of the same subject areas with the same keywords. We have opted to present the information in the form of two lists: (a) a list of all the focus areas (currently six) showing the subject

areas assigned to each and (b) a list of all the subject areas (currently 41) with their assigned keywords, including those subject areas (currently 11) which are not constitutive of any focus area at present. In the book analogy, the first list is the table of contents and the second presents the text arranged by sections, in this case ordered alphabetically.

A combined use of these two lists should make it relatively easy to work systematically with the concept hierarchy. For instance, one might begin with the first list and employ it to select the focus areas that are closest to a specific research interest or proposed article. One might then, with the same list, proceed to select some relevant subject area(s). Next, one might switch to the second list and verify one's choice of subject areas by looking at the keywords they offer or to which they lead through the built-in references. Since an interactive GUI is not currently available for moving through the network, explicit cross-references had to be given in the second list; this is achieved by including among the index terms, along with the keywords, the names of subject areas of related interest. Such cross-references are listed in *italics.* They refer users to other subject areas where they may find related keywords. On this basis they can then either select a number of index terms--names of subject areas and/or keywords assigned to them--that they find useful for thinking through the issue of interest or for indexing their article, or else they will hopefully get in touch with the editors and suggest additional or better keywords!

Conversely, where relevant keywords are already obvious from the outset, due to standard usage, one may use them, by means of the search function of one's Web browser, to search the second list for all subject areas under which these keywords occur. One can then, with the help of both lists, explore other relevant parts of the conceptual network and thus find themes, concepts, or relationships of interest.

More guidance on the use of the two lists for indexing purposes can be found in Section 4 below. Readers will now want to see the two lists, before caring for more discussion. The following links lead you to them (but make sure you return to the present Editorial for a continuing introduction to the JRP concept hierarchy!). You will also find the links in the new "Contributors" section of the JRP Web site.

(1) JRP Focus Areas: The Journal's Aims, Subject Areas, and Core Questions
(2) JRP Subject Areas and Keywords

An initial version of the first list is also reproduced in Section 3 below (please use the two links provided above to find the most recent versions). A compact current version of the first list is available on the JRP home page. You can go to that page from anywhere in the site by conveniently clicking on the "Home" tab in the top menu bar.

3. JRP Focus Areas

Table 1. *JRP Focus Areas: Aims, Subject Areas, and Core Questions*

Focus Area	Subject Areas	Core Questions
#1. Research Applications *Aim:* to develop conventional or innovative forms of applied research with a view to meeting contemporary challenges	*Applied Research - Science & Technology - Science & Politics - Applied Social Science - Commercial Research - Art & Design - Professionalism & Expertise - Reflective Practice*	What happens when the procedures or results of research are applied to practical affairs? What constitutes competent practice in applied research?
#2. Research Spaces *Aim:* to examine the institutional, cultural, and historical factors that shape research practice so as to help researchers open up new spaces for innovative research	*Research Contexts - Research Culture - Research Ethics - Research Policy - Science & Politics - Science & Society - Science & Technology*	What societal or historical forces shape research practice and obstruct or promote open inquiry? Are there new spaces for meaningful inquiry to be discovered and cultivated?
#3. Research Education *Aim:* to promote new directions in research education so as to prepare researchers for their role in society	*Research Training - Science Education - Research Competence - Research Process - Research Methods - Research Ethics - Professionalism & Expertise - Participatory Research - Research Reporting & Publishing - Science & Society*	How can research education be more effective? Are there ways to better prepare researchers for their roles and responsibilities in society?
#4. Research Experiences *Aim:* to offer researchers a platform for sharing research experiences, appreciating the experiences of other researchers, and developing their own understanding of good practice	*Research Experiences & Cases - Researcher Biographies & Careers - Research Contexts - Research Competence - Research Process - Research Reporting & Publishing - Professionalism & Expertise - Reflective Practice - Research on Research*	As humans, how do researchers deal with the demands of research practice? What can be learnt from the experiences of individual researchers or research teams?
#5. Research Philosophy *Aim:* to encourage reflection on the philosophical underpinnings of research, the specific research frameworks they inform, and corresponding notions of what constitutes valid and relevant research	*Research Frameworks & Paradigms - Philosophy of Science - Practical Philosophy - Critical Social Science - Reflective Practice - Systems Thinking - Science & Society*	What kinds of thought patterns, beliefs, values, and conventions underlie research practice? Can philosophical reflection support new forms of good practice?
#6. Research on Research		

Aim: to review and innovate conventional thinking about research as it is contained in notions such as scientific method, objective attitude, and logic of inquiry, with a view to expanding their range of application and exploring new forms of research	*Logic of Inquiry - Science Theory - Scientific Method - Philosophy of Science - Research Process - Research Methods - Systems Thinking - Science & Society - Second-Order Research*	What can be learnt from successful and unsuccessful cases of research, what constitutes its specific quality? How can the process of research be extended to cover new domains?

4. JRP Indexing System

This section explains the use of the concept hierarchy for indexing purposes. Indexing will in future occur not only within published articles but also within the metadata basis that belongs to all electronic article files. As a rule, index terms will be the same in both cases; authors will, however, remain free to specify their own terms whenever they find no fitting terms in the concept hierarchy. Editors keep the right to adapt them, where necessary, to the needs of the journal.

So far, there was merely one level of index terms, both in metadata basis and in the articles themselves. The index terms were included in the metadata basis only at the lowest of its three levels, the level of keywords, and they were selected unsystematically. However, the metadata capability of the *Open Journal Systems* (OJS) comprises three levels and these have now been activated within the JRP submission procedure. With the present publication of the concept hierarchy, authors will be able--and requested--to index their articles at all three levels. Please do this carefully, as entering metadata is currently only possible to authors as part of the submission procedure; whether metadata editing rights should also be available to authors after the submission stage, including articles published in back issues of JRP, is an issue currently under review (it raises a number of complex technical questions).

4.1. Three Indexing Levels of *Open Journal Systems* (OJS)

It is important to note that the three levels provided for indexing metadata in the OJS are not entirely equivalent to those of the JRP concept hierarchy. Although their intent is similar, the OJS interprets and designates the three levels a bit differently. It follows a standard set by the Dublin Core Metadata Initiative (DCMI), a standard used universally by libraries and indexing services (see DCMI, 1995/2011). To ensure full compatibility of the JRP indexing system with the Dublin standard, we keep its designations of the three levels. Keeping to this standard will not prevent us from making full and meaningful use of the JRP concept hierarchy for indexing articles. It is, however, necessary that when you choose and enter your index terms, you are aware of the way we align the three levels of the JRP concept hierarchy with those of the Dublin convention. Figure 2 shows a screenshot of the input screen for index terms as it appears within the submission procedure.

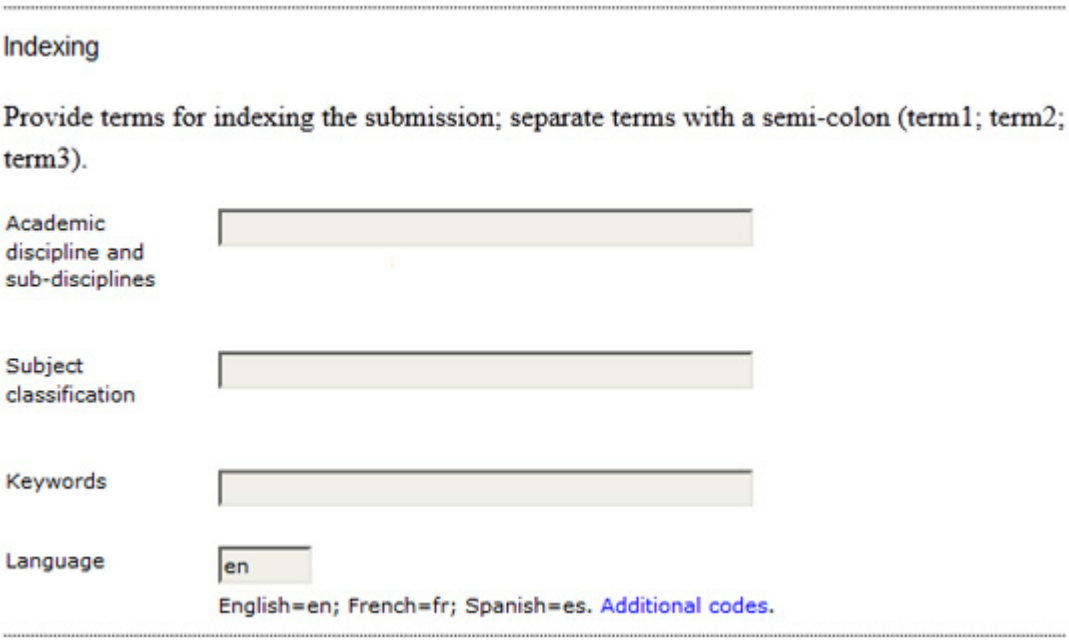

Figure 2. The three indexing levels of the *Open Journal Systems* (OJS)

This is how the JRP indexing system accommodates the three levels of indexing metadata shown in Figure 2:

> (a) *Top level--Academic discipline and sub-disciplines:* Do *not* enter here the names of focus areas you may have chosen among your index terms. Instead, indicate the field of research, or professional or artistic practice, within which you work and/or for which your article is relevant. Start with a broad term (e.g. "medicine"), then add one or several more specific terms (e.g., "clinical research" and "alternative medicine"). You are free to choose your preferred designations for the disciplines and sub-disciplines in question. If you like to follow a standard, you may refer to the discipline and sub-discipline names proposed by the *Government of Canada Core Subject Thesaurus* (Library and Archives Canada, 2004/2011, go to "Search the Thesaurus," then to "Browse Subject Categories," then work your way down the hierarchy from the top-level categories until you find suitable designations). Note that the Thesaurus refers to the disciplines and sub-disciplines it lists as "subject categories," whereas the OJS speaks of "disciplines"; we will understand both terms to refer to the top level of indexing metadata.
>
> (b) *Middle level--Subject classification:* "Subjects" or "subject classification" in the OJS are akin to what we designate "subject areas" and "focus areas." So this is the place to enter the index terms you have drawn from the upper two levels of the JRP concept hierarchy. You may enter the names of both focus areas and subject areas. We recommend that you enter

at least one or two subject areas. Indicating a focus area is possible but not required. Do not use keywords from the bottom level of the JRP concept hierarchy here.

(c) *Bottom level--Keywords:* "Keywords" are akin to what we also call "keywords" in the JRP concept hierarchy. So this is the place to enter the index terms you have drawn from the bottom level of the JRP concept hierarchy. In addition, this is also the place to enter names of authors whose work is discussed extensively in your article; see Rule #3 of the additional user guidance provided below.

4.2. Basic Rules for Selecting and Combining Index Terms

Here is some user guidance for useful ways to combine index terms drawn from the JRP concept hierarchy. As the top indexing metadata level is reserved for entering disciplines and sub-disciplines that may be chosen freely, our recommendations focus on the lower two levels. The index terms for these two levels, it should be clear by now, may be drawn from all three levels of the JRP concept hierarchy, that is, they may stand for focus areas, subject areas, and/or simple keywords. This raises the question of how exactly one should combine index terms that stand for the similar topics or ideas but are drawn from different levels, thus expressing broader and narrower aspects of that topic or idea. We recommend that three basic rules be followed:

Rule #1. *Use specific terms.* To help potential readers find your article, use the most specific terms available in the concept hierarchy for describing your article's specific content. This rule is particularly useful for choosing keywords at the bottom level of index terms.

Example: If the article discusses the pros and contras of taking an "advocacy" stance versus a "disinterested" stance in applied research, use "applied research" at the middle level and "advocacy research" (a keyword drawn from the subject area *applied research*) at the bottom level of the input screen. Do not repeat "applied research" at the bottom level. Instead, if the article is about taking an advocacy stance specifically in professional intervention, add some related keywords drawn from the subject area *professionalism & expertise*, for example, "professional intervention."

Sometimes specific terms are compound terms (i.e., multi-word terms) that include an ampersand ("&"). We recommend that you use such compound terms with care. They can be useful for specifying your article's focus accurately and thus will bring you specifically interested readers; but if used unwisely, they may also prevent potential readers from discovering your article, simply because they may not be searching for the exact compound term. Hence, use such terms only in combination with simpler terms. For example, use "R&D; research; development" rather than only "R&D." Please note that "&" is either treated as equivalent to "and" or is ignored in many search engines; in the latter case, all components of a compound term will still be used as search criteria. Follow the writing convention in your field while choosing between "&" and "and."

Rule #2. *Cover all essential subjects.* Make sure your choice of index terms does justice to the full range of topics discussed in some detail by your article. This rule is particularly useful for choosing focus and subject areas as index terms at the middle level.

Example: If the same article also covers other aspects of applied research in professional practice, say, concerning good practice in professional intervention in general, use a combination of broad index terms such as "applied research" and "professionalism" with specific terms such as "good practice" (or "good professional practice") along with "advocacy stance" (keywords drawn from the two subject areas *applied* research and *professionalism & expertise*). Add more specific terms such as "disinterestedness" and "ethos of service" to respond to Rule #1 as well as to make sure you cover all essential subjects discussed in your article. Say, if your article takes a partly historical perspective, you may want to add "history of professionalism."

The last suggestion brings up the issue of duplication. As far as possible, avoid duplicating ideas already expressed by broader terms you have chosen. Hence, in combination with (broad or specific) terms that already do refer to professionalism, use "history" and "intervention" rather than "history of professionalism" and "professional intervention." However, if "history of professionalism" is really your core topic, you may want to make sure that all readers searching specifically for "history of professionalism" will find you. They may not use any other search terms, nor just search for "professionalism; history" (the equivalent of "history OR professionalism" as expressed in Boolean search terms); for the latter option would mean they will get a list of all articles talking about professionalism or history but not necessarily both. Of course, it might be better for them in such a case to search for "professionalism AND history"; but not all potential readers are familiar with the rules of Boolean search. Or they may have a specific reason to use the phrase "history of professionalism" (say, someone is writing a Ph.D. thesis about exactly this topic). The basic recommendation is, always put yourself in the situation of the readers whom you would like to reach. For the core topic of your article, accepting--with restraint--some duplication of terms may make sense.

Rule #3. *Use author names where appropriate.* As a third and last basic rule, if an article discusses specifically the work of one or several authors other than the author(s) of the article itself, as is the case typically in review articles, it makes sense and is permitted to use author names as index terms. Author names should be handled as if they were keywords, that is, as bottom-level index terms.

Example: If the article specifically discusses Mary O. Furner's (2010) historical analysis of the role of advocacy in the social science professions, add "Mary O. Furner" as an index term. This will help potential readers interested in her work to find your article. Consider adding one or two other main authors whose work your article also discusses and perhaps compare with that of Furner. Some restraint is recommended here--do not enumerate all discussed authors, and never simply all cited authors. Never enter your own name; an article's author(s) will automatically be part of the article's metadata basis and it would be regarded poor style to include one's own name(s) among the index terms.

The over-all idea of good indexing practice, then, is to combine index terms so as to capture an article's main topic as specifically as possible, yet at the same time cover the entire range of topics it discusses. In short, be specific *and* comprehensive. (The same guideline obviously also applies for search purposes.) This is why the concept hierarchy offers quite a detailed selection of specific keywords, along with permitting the use of index terms drawn from the upper two levels. It gives you the flexibility you need to combine broader and narrower index terms without duplicating the topics to which you refer. Although a certain degree of parsimony is desirable in this respect, what really matters is that your target audience actually finds the article.

A final consideration is this. Following the *Dublin Core Metadata* standard, the OJS will use as index terms not only those which you enter yourself (the article's index terms strictly speaking) but also a number of additional metadata that are traditionally used by search engines to identify the content of documents. These additional metadata include the document's title, its short description (abstract), its academic discipline(s), author names and affiliations, and a few more (in the HTML version of any JRP article, open the right-hand "Indexing metadata" window to see these data). It may help you to be aware of the two main implications this has for your indexing job: (i) Along with the choice of index terms, it pays if you also make sure that your Abstract describes the article's content well and mentions some of its key concepts. (ii) At the same time, the Dublin standard means you need not worry too much about the risk of over-specifying your index terms. So long as you try to achieve a good balance of the three rules given above, you can be confident that your JRP article will find its audience.

4.3. A Step-by-Step Guide for Indexing Your Article

Indexing articles in the JRP indexing system involves two basic steps. In the first basic step, you use the JRP concept hierarchy to determine your preferred combination of index terms. To this end, refer to the two lists introduced in Section 2.2 and to the basic rules just given in the preceding Section 4.2. As an additional hint, it is a good idea to note down all your selected index terms so that later on you remember the conceptual level for which they stand. This is useful as the OJS indexing metadata, as we have seen, are also structured hierarchically.

The second basic step consists in adding the selected index terms to the metadata that are part of your article. As entering these metadata is a required step of the submission procedure, it is necessary that you have your index terms ready when starting the submission. Remember, this is your only chance to enter indexing metadata, so be sure to prepare and follow the required steps carefully.

Steps to be followed to enter indexing metadata as part of the submission procedure:

> 1. Have your index terms ready. Log in as author (you need to be registered first). After selecting "author," you find yourself in the "Active Submissions" window that lists all your current submissions under review (if any).

2. Subsequent to the list of your active submissions, find the subsection "Start a New Submission." Therein, find the link which says "CLICK HERE to go to step one of the five-step submission process" and click on it.

3. You have entered the submission procedure and find yourself in Step 1, START. In the drop-down menu of the subsection "Journal Section," select the article type you want to submit. Below, confirm your agreement with the stated terms of submission by checking each of the three boxes. Click on "Save and Continue."

4. You find yourself in Step 2, ENTER METADATA. In the appropriate entry fields, enter your first and last name (middle name is optional), your affiliation (optional), your e-mail address, the URL of your personal Web site (optional) and your short biography (optional). If you have previously entered these data during registration, they will automatically display in the appropriate field; you can adapt them if necessary. You can also add the corresponding data for co-authors. Then enter the title of your article (mandatory) and its abstract (optional, if contained in the article). You then get to the subsection "Indexing." Complete the three levels of metadata according to the explanation of the three levels given above (Section 4.1) and the guidance regarding the combination of index terms also provided above (Section 4.2). Complete Step 2 by entering the name of agencies that supported your research, if you are required to acknowledge them, and by clicking on "Save and Continue."

5. You then arrive in Step 3, where you can upload your article, and subsequently in Step 4, where you can upload supplementary files if necessary (e.g., figures and tables not integrated within the article). Finally, Step 5 allows you to control the list of files you uploaded and to complete the submission procedure by confirming your upload.

4.4. How to Use the JRP Indexing System for Searching Material

Some readers who are not so familiar with search procedures may also find it helpful to have a similar step-by-step guide for search purposes:

Steps to be followed to search material in JRP based on indexing metadata

1. You need not be logged in.

2. From the JRP concept hierarchy, select the search terms you want to use. To this end, you may follow the basic rules specified in Section 4.2 above.

3. You can search the entire JRP Web site for these terms from wherever you find yourself in the site, by directly entering them in the input field

Journal Content, to be found in the right-hand column of your screen about half-way down the column.

4. Enter search terms as you would do it for a normal Internet search by means of Google or some other search machine, linking them with AND or OR, excluding others with NOT, using * as a wildcard (e.g., for the ending or spelling of a term) and putting entire phrases within quotation marks.

5. In the drop-down menu just below the input field for your search terms, you can moreover define the desired search scope. If you wish to find articles that have actually been indexed with your search terms, select "Index terms"; if your search terms need not be found among the index terms of each listed article but may occur anywhere in the text, use "Full text," and so on. Confirm by clicking on "Search."

6. The same rules apply for searches from within any opened JRP article (HTML version), except that in this case, you find the input field at the bottom of the right-hand column of the screen and it is now called *Search Journal.* The scope of this search is automatically "Full text."

7. Finally, Internet searches for related material are also possible, but only from within an article (HTML version). To this end, select the item *Search Engines* just above the *Search Journal* section of the right-hand column. A window opens that shows all index terms that are part of the current article's metadata; you can conveniently adopt them as your search terms for an Internet search or modify them as you like. Select your preferred search engine (Google, Google Scholar, or others) and hit "Search" to start the search.

5. Outlook

We anticipate three main developments of the JRP concept hierarchy in the future. The first concerns the content of the concept hierarchy: compiling a thesaurus is a continuous process for which we call upon the collaboration of all those interested in its use. The second concerns an extension of user involvement in collecting and maintaining their indexing metadata; and the third, a future graphic interface for displaying and exploring the concept hierarchy. This section briefly discusses the latter two issues; the call for collaboration is part of the subsequent, concluding section of this Editorial.

User involvement in metadata management: User involvement in collecting indexing metadata is currently a required part in the procedure for article submission. It is, at the same time, limited to this only opportunity, which also means it is a tool for authors only and once they have entered their preferred index terms and completed the submission procedure, they cannot change them. Yet indexing metadata, like all data, need to be maintained. While most other metadata should remain stable along with the content, format, and location of published articles, stability of indexing data is not a virtue in

itself. Their main virtue consists in helping people in finding publications that respond to their specific interests and to the topics they are working on. Just as these topics and interests change with the development of a field of inquiry and practice, the language people use for referring to them changes, too.

With a view to ensuring good indexing practice, it therefore looks like a meaningful idea to enable authors to revise their indexing metadata when the need arises. Leaving current technical limitations aside, it is difficult to see why authors should be entrusted with the responsibility of selecting and entering their indexing metadata but not of correcting and maintaining them after the submission stage. We suspect the reason that the OJS reserves later metadata editing access to journal administrators is a concern for the quality of the metadata basis (avoiding possible input errors, etc.); but this concern may just as well be seen to speak in favor of user involvement after the submission stage. As authors discover deficiencies in their original choice of index terms, it makes sense to allow them to adapt them, whereby--it needs to be emphasized once more--stability of published content remains an overriding concern. To ensure metadata quality, online revisions of index terms might pass through a stage of editorial scrutiny, similarly to what happens in the submission stage, so as to eliminate errors and also ensure consistent indexing practice across different articles published.

As a last consideration, JRP is a small but rather special journal; it has grown and will continue to grow thanks to the involvement of an active community of readers, reviewers, and authors who regularly contribute to the journal through the JRP Forum and other channels of communication.

We are therefore currently examining the possibility of extending authors' access to metadata editing to later stages, so that they would be able to correct errors or omissions or to adapt index terms to the developing state of discussion and vocabulary in a field.

Development of graphic interfaces: In an age of relational data banks, sophisticated visualization software, and interactive graphical user interfaces (GUIs), working with conventional lists is not entirely satisfactory. It does the job, but not quite as efficiently and conveniently as one might imagine. Representing the whole structure of the conceptual network in a user-friendly manner thus remains a design task for the future.

The aim will be to visualize the network in a way that should allow users gaining an easy overview of the entire network as well as of its interesting parts. Such a zooming-in-and-out feature should come with an additional capability of moving freely in all directions, so as to make it easy to explore relevant conceptual relationships. A basic model might display the concept hierarchy as an interactive "word map" along the lines of *Visual Thesaurus®* (VT), a commercial software available for licensing. Here is a short description from the Web site of VT:

> Say you have a meaning in mind, like "happy." The VT helps you find related words, from "cheerful" to "euphoric." The best part is the VT works like your brain, not a paper-bound book. You'll want to explore just to see

> what might happen. You'll discover--and learn--naturally and intuitively. You'll find the right word, write more descriptively, freely associate--and gain a more precise understanding of the English language. (ThinkMap, 1998/2011)

A large body of literature has grown in recent years around cognitive mapping conceptions such as "mind mapping" (e.g., Buzan, 2000), "concept mapping" (e.g., Novak & Cañas, 2008), "dialogue mapping" (e.g., Conklin, 2005), and "knowledge cartography" (e.g., Okada, Buckingham-Shum, & Sherborne, 2008), a body of literature that focuses on theoretical and practical issues of interactive representation of conceptual relationships and which also has brought forth a number of related software products such as *FreeMind* (open source) or *iMindMap*® (commercial) for mind mapping and *Compendium* (open source) for dialogue mapping, to mention just a few.

Another appealing model might be seen in the interactive capabilities of Google Maps, particularly regarding the ease it offers users in zooming in and out of particular areas of geographical maps (i.e., varying the scale or resolution of representation) as well as in moving, at any chosen scale, in all directions and following links to additional information and pictures. We cannot pursue this vision any further here, but it certainly opens up inspiring prospects for the future.

6. A Call for Collaboration

For a field as broad and dynamic as reflection on the practice of research in all domains of human inquiry and agency, including academic, governmental, and commercial research as well as professional and artistic practice and non-professional, everyday forms of inquiry and expertise, it is clear that the only adequate way to conceive of a concept hierarchy such as the one we propose is as a work in progress. Not only this present first version but also each subsequent update will remain forever incomplete and capable of further development.

It is also clear that developing a satisfactory concept hierarchy means to constantly adapt it to the needs of its target audience, otherwise it will not be used. As JRP readers and contributors coming from different fields of inquiry will hopefully start exploring and using the tool and make it their own, they will inevitably encounter omissions and other shortcomings, observations they will hopefully share with us. Likewise, as JRP authors over time will always again explore new issues and introduce new language to the journal, the journal's concept hierarchy will have to evolve with them.

In any case, the resulting selection of focus areas, subject areas, and keywords, as well as of relevant relationships among all of them, will always remain conditioned by the knowledge and interest of those involved. It is therefore important to widen the basis of those involved as much as possible. All our readers and contributors--in fact all researchers who may want to use the concept hierarchy--should understand this situation as a call to get involved. The initiative we launch is meant to be an ongoing, open-ended, collaborative effort.

An invitation: We publish the initial version of the JRP concept hierarchy with a simultaneous invitation to our readers, authors, reviewers, editorial staff, and all other contributors and users, to help us in developing it into an increasingly valuable tool for reflecting and writing about research practice. Our effort does not end here, but only marks a beginning.

With your help, we intend to update the JRP concept hierarchy on a regular basis, so as to adapt it to the current and future needs of its users. Everyone is cordially invited to contribute. Please communicate to us whatever needs for additions, developments, or modifications you identify. Thank you.

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